

REMARKS**Introduction*****Status of claims***

Claims 1 to 11 have been examined on the merits.

Claims 10 and 11 have been withdrawn as being directed to a non-elected invention.

Claims 1 and 5 have been currently amended. Support for these amendments is found at page 9, lines 6 to 8 of the specification where the pressure applied during pressing is disclosed, and at page 11, lines 9 to 12, of the specification where a sandwich-like structure is discussed.

No new matter has therefore been introduced, and entry of the amended claims is respectfully requested.

The Office Action***Rejection under 35 U. S. C. § 112***

Claims 1 to 9 have stand rejected under 35 U. S. C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicants regard as the invention.

The phrase "under pressing conditions" has been replaced with the definition of page 9, lines 6 to 8.

The phrase "sandwich-like" has been deleted and the definition found at page 11, lines 9 to 12, of the specification is already part of claim 5.

It is believed that this rejection has been rendered moot by these amendments.

Rejection under 35 U. S. C. 103 (a)

Claims 1 to 8 have been rejected under 35 U. S. C. 103 (a) over the Heine et al US 6,030,913 ("Heine") in view of Krenkel US 6,086,814.

Heine fails to disclose or suggest using compressible cores exhibiting a length change in the pressing direction of at least 5 % upon application of a pressure of from 0.1 MPa to 59 MPa, and consisting of a material that is pyrolyzed or at least partially pyrolyzed in a carbonization step.

The use of cores is known from Krenkel where one or more cores are inserted into the carbon fiber body before it is ceramicized. These cores have dimensions which correspond to the desired recesses or cavities. See column 2, lines 44 to 48, particularly, lines 47 to 48. It is expressly taught that the dimensions of the cores must correspond to the dimensions of the cavities or recesses desired.

Contrary to the applied prior art, it has been found in the present invention that the use of a core material that is compressed in the direction of pressing by at least 5 %, which means that the core does not correspond to the dimensions of the desired recesses or cavities, allows production of fiber-reinforced hollow bodies which do not have the lower fiber density in the spaces filled by the press molding composition between the cores, and have no phase boundary at the transition between the material of the core zone and the material of the layers above and below the core zone. Attention is directed to page 6, lines 8 to 19 of the present specification, and for the problem solved by the present invention, as expressed at page 4, line 35, to page 5, line 20, and page 5, line 25, to page 6, line 6.

Neither the problem solved by the present invention, nor the specific method used to solve this problem is disclosed or suggested by either Heine or Krenkel or any reasonable combination thereof.

Applicants also submit that foamed polystyrene may exist in different qualities, having different compressibility, and only such polystyrene foams obeying to the condition set forth in claim 1, i. e. those having a compressibility leading to a length change in the pressing direction of at least 5 %, at a pressure applied of from 0.1 MPa to 50 MPa, can be used for the present invention. Nowhere in the Krenkel reference is there a hint that compression of the cores may occur. The mention in column 2, lines 46 to 48 of the correspondence of dimensions clearly teaches away from the use of compressible cores.

Sangeeta et al US 6,030,913 ("Sangeeta") used in combination with Heine and Krenkel in the rejection of claim 9 mentions the use of silicon alloys for infiltration of C/C bodies to form silicon carbide. However, there is no teaching or suggestion in Sangeeta of using compressible cores with the specific properties as particularly pointed out and distinctly defined in amended claim 1, i. e. those of a length change of at least 5 % in the pressing direction upon application of a pressure of from 0.1 MPa to 50 MPa.

In summary, it is respectfully submitted that the invention as defined in claims 1-9 is not made obvious by the cited references, or any combination thereof, and favorable reconsideration is respectfully requested.

Double Patenting

Copending application 10/741,374 differs from the instant application in that it is a selection which calls for cores comprising at least three layers of differing compressibility in the adjacent layers, and wherein the compressibility of the inner layer is lower than that of the outer layers. Further action will be taken if the provisional rejection is made final.

It is believed that all of the issues mentioned in the Official Action have been properly addressed in this response, and entry of the amendments and favorable reconsideration are respectfully requested.

Respectfully submitted,

By Richard M. Beck
Richard M. Beck

Registration No.: 22,580
CONNOLLY BOVE LODGE & HUTZ LLP
1007 North Orange Street
P.O. Box 2207
Wilmington, Delaware 19899
(302) 658-9141
(302) 658-5614 (Fax)
Attorney for Applicant

490509